REMARKS / ARGUMENTS:

Claims 1, 12 and 36 have been amended by further describing the distribution of the triazole fungicide in the polymer matrix as being at a molecular level or as finely divided pockets. Support for this feature is found in the specification at least at page 17, lines 14 – 17.

Claims 1, 3 – 8, 12 – 18, 36 – 38 and 40 - 51 are in the case.

No new matter has been added.

Rejection of claims 1,3,4,7 and 8 under 35 USC §103(a) as obvious over U.S. Patent No. 5,156,843 to Leong *et al.* in view of EP 0364406 to Reuter.

The Office has argued that Leong *et al.* teaches controlled release particles inclusive of fungicides, which are spherical, have a particle size of from 10 – 100 microns, and which comprise the same type of polymers that can be used in the present invention. The Office further appears to argue that either Reuter or Dao *et al.* (presumably U.S. Patent No. 5,719,103) teaches the triazole fungicides that are features of the present claims.

Claims 1, 12 and 36 have now been amended to describe the present particles as being solid and generally spherical and comprising a triazole fungicide dispersed in a polymer matrix at a molecular level or as finely divided pockets. It is believed that this structure clearly distinguishes the present particles over either the particles of Leong *et al.*, or the dust free compositions of Reuter, or the powders of Dao *et al.* The reasons are as follows.

Leong *et al.* describe particles in which "... the functional substance is retained in the pores of microscopic porous particles, the particles being of an inert solid material and the pores being interconnected and open to the particle surface." (col. 1, lines 51 – 55). In the particles of Leong *et al.*, the small interconnecting pore network is a central feature of the invention. It is believed that the provision of the active ingredient in a form that is either dispersed at a molecular level or as finely divided pockets, as required in the present particles, is not taught or suggested by the Leong *et al.* patent, and would, in fact, defeat the inventive concept of that reference.

The difference between the particles of Leong *et al.* and the present invention is further understood when one considers the methods in which each is made. In Leong

et al., the particles are formed by suspension polymerization of certain monomers in the presence of the functional or active ingredient and a porogen (which can be the active ingredient). (See col. 3, lines 11 – 32). This technique is designed to provide the fine, interconnecting network of pores that the Leong *et al.* reference describes as being desirable. By way of contrast, the present particles are formed by providing a solution of a polymer and a triazole fungicide in an organic solvent, forming an emulsion of the organic phase in an aqueous phase, removing the organic solvent, and recovering the particles that are produced. (See, *e.g.*, page 37, line 23 – page 38, line 15 of the present specification). No porogen is used, as in Leong *et al.*, and no suspension polymerization takes place in the presence of the active ingredient, as Leong *et al.* describe.

It is maintained, therefore, that the particles of Leong *et al.* are distinguished over those of the present invention for the reasons discussed above, and that neither Dao *et al.*, nor Reuter provides the missing element that would guide one or ordinary skill to produce a particle having the features as now described in the amended claims. It is respectfully requested that the present rejection be reconsidered and withdrawn.

Rejection of claims 1,3,5,7,8,12 – 18, 36 -38, 41, 43, 45, 46, 48 and 50 under 35 USC §102(e) as anticipate by U.S. Patent No. 5,719,103 to Dao *et al.*

The Office has maintained this rejection and argues that the powders taught by Dao *et al.* meet the size and shape features of the present claims and, although the reference appears not to teach that the fungicide is dispersed in a polymer matrix, the presence of all of the components as a powder are considered to be the same thing as there is no indication otherwise. For example, the ingredients are seen as intermingled.

As discussed above, the Applicant has amended the claims to further describe the present particles as being solid and generally spherical and comprising a triazole fungicide dispersed in a polymer matrix at a molecular level or as finely divided pockets. It is believed that this structure clearly distinguishes the present particles over the powders of Dao *et al.*, for the reason that those powders are mere physical mixtures of the components, rather than being a fungicide dispersed in a polymer matrix in the form of a particle. This is clearly shown by contrasting the methods by which the Dao *et al.* powders are made with the method of making the present particle. In Dao *et al.*, "... dry

powder ingredients as well as pigment were combined in a commercially available mixing unit ... and blended until the mixture was homogeneous." (See col. 6, lines 45 – 48.) In comparison with the present particles, the method of preparation described by Dao *et al.* provides no possible way to obtain a particle having the features of the present particles. Dao *et al.* provides a physical mixture of ingredients in the form of a powder, while the present particles are generally spherical, solid, and contain a fungicide that is dispersed in the particle, either on a molecular basis or in discrete pockets. Accordingly, it is maintained that the Dao *et al.* reference can neither teach nor suggest the presently claimed particles, and it is respectfully requested that this ground of rejection be reconsidered and withdrawn.

Rejection of claims 1, 3 – 5, 7, 8, 12 – 18, 36 – 38, 40, 41, 43 – 46, 48 and 50 under 35 USC §103(a) over U.S. Patent No. 5,719,103 to Dao *et al.* in view of EP 034406 to Reuter.

For the reasons that are discussed above, it is respectfully maintained that the Dao *et al.* patent, alone or in view of Reuter, neither teaches nor suggests the particles and formulations of the present claims. It is respectfully requested that the present rejection be reconsidered and withdrawn.

Withdrawal of rejection under 35 USC §112 and objection to claims 6, 39, 42, 47 and 49.

The withdrawal of the rejection under 35 USC §112 is noted with appreciation.

The objection to claims 6, 39, 42 and 47 without further explanation is noted.

Clarification of the terms "molecular level":

In the Advisory Action, the Office questions the meaning of the terms "molecular level", in view of the particles being of micron, not Angstrom, in size.

In the present specification and claims, the terms "molecular level" are used in the context "...a triazole fungicide dispersed in a polymer matrix at a molecular level or as finely divided pockets ...". In the specification at page 17, lines 14 – 17, the distribution of the triazole fungicide in the polymer matrix of the particles is described as being either at a molecular level or as finely divided pockets containing a plurality of

molecules. It is believed that this use of the terms "molecular level" is well known in the art and it commonly understood to mean that the dispersed compound is distributed substantially in the form of single molecules throughout a matrix or other carrier, rather than as pockets or groups of a plurality of molecules. The terms "molecular level" having the same meaning as those terms are intended to have in the present specification appear widely in U.S. patents. Examples of this usage include claim 1 of U.S. Patent No. 6,653,141, claim 3 of U.S. Patent No. 6,589,453, claim 1 of U.S. Patent No. 6,514,651, at col. 4, lines 63, 64 of U.S. Patent No. 6,337,079, at col. 3, line 67 of U.S. Patent No. 6,316,015, and col. 3, line 55 of U.S. Patent No. 5,750,129, among others. Furthermore, a search of the world-wide web with the terms "molecular level, and mixing" finds many instances where these terms are used to describe the same feature as is presently described.

The fact that the subject microparticles are micron size, rather than Angstrom size, is irrelevant, because the present claims describe the distribution of fungicide molecules (which are quite small) within a matrix polymer that is in the form of a particle (which is of micron size).

Therefore, it is maintained that the terms "molecular level", as they are used in the present specification, are well known in the art and require no further clarification.

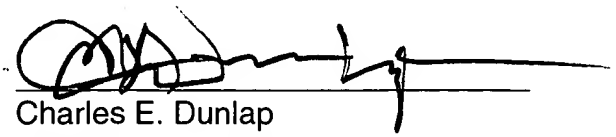
Request for reconsideration:

It is respectfully requested that the claims be amended as requested above and that the claims be passed to allowance. The Examiner is invited to call the undersigned attorney at the number given below for resolution of any remaining issues.

It is believed that no fee is required for the present response. However, if a fee is required, the Office is authorized to charge the fee to Deposit Account Number 50-2548.

Respectfully requested,
NELSON MULLINS RILEY & SCARBOROUGH

August 12, 2004
Date



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